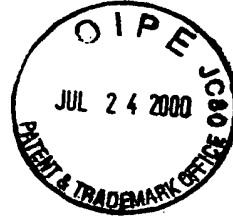


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<110> Nolan, Garry P.
Hitoshi, Yasumichi

<120> TOSO

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<140> 09/135,238

<141> 1998-08-17

<150> 06/066,063

<151> 1997-11-17

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<213> Homo sapiens

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Val Thr Ile Lys Cys Pro Leu Pro Glu Met His Val Arg Ile Tyr Leu
 35 40 45

Cys Arg Glu Met Ala Gly Ser Gly Thr Cys Gly Thr Val Val Ser Thr
 50 55 60

Thr Asn Phe Ile Lys Ala Glu Tyr Lys Gly Arg Val Thr Leu Lys Gln
 65 70 75 80

Tyr Pro Arg Lys Asn Leu Phe Leu Val Glu Val Thr Gln Leu Thr Glu
 85 90 95

Ser Asp Ser Gly Val Tyr Ala Cys Gly Ala Gly Met Asn Thr Asp Arg
 100 105 110

Gly Lys Thr Gln Lys Val Thr Leu Asn Val His Ser Glu Tyr Glu Pro
 115 120 125

Ser Trp Glu Glu Gln Pro Met Pro Glu Thr Pro Lys Trp Phe His Leu
 130 135 140

Pro Tyr Leu Phe Gln Met Pro Ala Tyr Ala Ser Ser Ser Lys Phe Val
 145 150 155 160

Thr Arg Val Thr Thr Pro Ala Gln Arg Gly Lys Val Pro Pro Val His
 165 170 175

His Ser Ser Pro Thr Thr Gln Ile Thr His Arg Pro Arg Val Ser Arg
180 185 190

Ala Ser Ser Val Ala Gly Asp Lys Pro Arg Thr Phe Leu Pro Ser Thr
195 200 205

Thr Ala Ser Lys Ile Ser Ala Leu Glu Gly Leu Leu Lys Pro Gln Thr
210 215 220

Pro Ser Tyr Asn His His Thr Arg Leu His Arg Gln Arg Ala Leu Asp
225 230 235 240

Tyr Gly Ser Gln Ser Gly Arg Glu Gly Gln Gly Phe His Ile Leu Ile
245 250 255

Pro Thr Ile Leu Gly Leu Phe Leu Leu Ala Leu Leu Gly Leu Val Val
260 265 270

Lys Arg Ala Val Glu Arg Arg Lys Ala Leu Ser Arg Arg Ala Arg Arg
275 280 285

Leu Ala Val Arg Met Arg Ala Leu Glu Ser Ser Gln Arg Pro Arg Gly
290 295 300

Ser Pro Arg Pro Arg Ser Gln Asn Asn Ile Tyr Ser Ala Cys Pro Arg
305 310 315 320

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325 330 335

Gly Pro Gly Ala Pro Leu Pro Pro Ala Pro Leu Gln Val Ser Glu Ser
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Pro Trp Leu His Ala Pro Ser Leu Lys Thr Ser Cys Glu Tyr Val Ser
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Tyr Ile Asn Val Pro Ala
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<212> PRT

<213> Homo sapiens

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<220>
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 <222> (61)..(62)
 <223> The xaa at positions 61 and 62 represents an
 unknown amino acid.

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 Arg Ile Tyr Lys Cys Arg Glu Asn Ala Gly Ser Gly Thr Cys Gly Thr
 20 25 30
 Val Val Ser Thr Thr Asx Phe Ile Lys Ala Glu Xaa Xaa Xaa Xaa Xaa
 35 40 45
 Tyr Lys Gly Arg Val Thr Leu Lys Gln Tyr Pro Arg Xaa Xaa Lys Asn
 50 55 60
 Leu Phe Leu Val Glu Val Thr Glx Leu Thr Glu Ser Asp Ser Gly Val
 65 70 75 80
 Tyr Ala Cys Gly

<210> 4
 <211> 84
 <212> PRT
 <213> Homo sapiens

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 <222> (13)..(14)
 <223> The xaa at positions 13 and 14 represents an

unknown amino acid.

<220>

<221> UNSURE

<222> (61)..(62)

<223> The xaa at positions 61 and 62 represents an
unknown amino acid.

<220>

<221> UNSURE

<222> (27)

<223> The xaa at position 27 represents an unknown amino
acid.

<400> 4

Leu Ser Leu Thr Cys Thr Val Ser Gly Ser Thr Phe Xaa Xaa Ser Asn
1 5 10 15

Asp Tyr Tyr Thr Trp Val Arg Gln Pro Pro Xaa Gly Arg Gly Leu Glu
20 25 30

Cont Trp Ile Gly Tyr Val Phe Tyr His Gly Thr Ser Asp Asp Thr Thr Pro
35 40 45

Leu Arg Ser Arg Val Thr Met Leu Val Asp Thr Ser Xaa Xaa Lys Asn
50 55 60

Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val
65 70 75 80

Tyr Tyr Cys Ala

<210> 5

<211> 84

<212> PRT

<213> Homo sapiens

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<221> UNSURE

<222> (13)

<223> The xaa at position 13 represents an unknown amino
acid.

<220>

<221> UNSURE

<222> (45)..(50)

<223> The xaa at positions 45 through 50 represents an
unkown amino acid.

<220>

<221> UNSURE

<222> (60)..(63)

<223> The xaa at positions 60 through 63 represents an
unknown amino acid.

<400> 5

Val Thr Leu Thr Cys Arg Ser Ser Thr Gly Ala Val Xaa Thr Thr Ser
1 5 10 15

Asn Tyr Ala Asn Trp Val Gln Gln Lys Pro Asp His Leu Phe Thr Gly
20 25 30

Ile Gly Gly Thr Asn Asn Arg Ala Pro Gly Val Pro Xaa Xaa Xaa Xaa
35 40 45

Xaa Xaa Ala Arg Phe Ser Gly Ser Leu Ile Gly Xaa Xaa Xaa Xaa Asn
50 55 60

Lys Ala Ala Leu Thr Ile Thr Gly Ala Gln Thr Glu Asp Glu Ala Ile
65 70 75 80

Met Phe Cys Ala

<210> 6

<211> 84

<212> PRT

<213> Homo sapiens

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<221> UNSURE

<222> (12)..(15)

<223> The xaa at positions 12 through 15 represents an
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<221> UNSURE

<222> (43)..(48)

<223> The xaa at positions 43 through 48 represents an
unknown amino acid.

<220>

<221> UNSURE

<222> (61)..(62)

<223> The xaa at positions 61 through 62 represents an unknown amino acid.

<400> 6

Thr Ser Leu Asn Cys Thr Phe Ser Asp Ser Ala Xaa Xaa Xaa Xaa Ser
1 5 10 15

Gln Tyr Phe Trp Trp Tyr Arg Gln His Ser Gly Lys Ala Pro Lys Ala
20 25 30

Leu Met Ser Ile Phe Ser Asn Gly Glu Lys Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45

Glu Glu Gly Arg Phe Thr Ile His Leu Asn Lys Ala Xaa Xaa Ser Leu
50 55 60

His Phe Ser Leu His Ile Arg Asp Ser Gln Pro Ser Asp Ser Ala Leu
65 70 75 80

Cont Tyr Leu Cys Ala

<210> 7

<211> 84

<212> PRT

<213> Homo sapiens

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<221> UNSURE

<222> (11)..(14)

<223> The xaa at positions 11 through 14 represents an unknown amino acid.

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<221> UNSURE

<222> (18)

<223> The xaa at position 18 represents an unknown amino acid.

<220>

<221> UNSURE

<222> (28)

<223> The xaa at position 28 represents an unknown amino acid.

<220>

<221> UNSURE

<222> (59)..(61)

<223> The xaa at positions 59 through 61 represents an unknown amino acid.

<400> 7

Val Thr Leu Arg Cys Lys Pro Ile Ser Gly Xaa Xaa Xaa Xaa His Asn
1 5 10 15

Ser Xaa Leu Phe Trp Tyr Arg Gln Thr Met Met Xaa Arg Gly Leu Glu
20 25 30

Leu Leu Ile Tyr Phe Asn Asn Asn Val Pro Ile Asp Asp Ser Gly Met
35 40 45

Pro Glu Asp Arg Phe Ser Ala Lys Met Pro Xaa Xaa Xaa Asn Ala Ser
50 55 60

Phe Ser Thr Leu Lys Ile Gln Pro Ser Glu Pro Arg Asp Ser Ala Val
65 70 75 80

Cont
Tyr Phe Cys Ala

<210> 8

<211> 84

<212> PRT

<213> Homo sapiens

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<222> (11)..(14)

<223> The xaa at positions 11 through 14 represents an unknown amino acid.

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<221> UNSURE

<222> (28)

<223> The xaa at position 28 represents an unknown amino acid.

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<221> UNSURE

<222> (41)

<223> The xaa at position 41 represents an unknown amino acid.

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 <222> (46) .. (48)
 <223> The xaa at positions 46 through 48 represents an
 unknown amino acid.

<220>
 <221> UNSURE
 <222> (62)
 <223> The xaa at position 62 represents an unknown amino
 acid.

<400> 8
 Val Glu Leu Thr Cys Thr Ala Ser Gln Lys Xaa Xaa Xaa Xaa Lys Ser
 1 5 10 15

Ile Gln Phe His Trp Lys Asn Ser Asn Gln Ile Xaa Lys Ile Leu Gly
 20 25 30

Asn Gln Gly Ser Phe Leu Thr Lys Xaa Gly Pro Ser Lys Xaa Xaa Xaa
 35 40 45

Leu Asn Asp Arg Ala Asp Ser Arg Arg Ser Leu Trp Asp Xaa Gln Gly
 50 55 60

Asn Phe Pro Leu Ile Ile Lys Asn Leu Lys Ile Glu Asp Ser Asp Thr
 65 70 75 80

Tyr Ile Cys Glu

<210> 9
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 <213> Homo sapiens

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 <222> (12) .. (14)
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 <222> (41)
 <223> The xaa at position 41 represents an unknown amino
 acid.

<400> 9


Ala Lys Met Ser Cys Glu Ala Lys Thr Phe Pro Xaa Xaa Xaa Lys Gly
1 5 10 15

Thr Thr Ile Tyr Trp Leu Arg Glu Leu Gln Asp Ser Asn Lys Asn Lys
20 25 30

His Phe Glu Phe Leu Ala Ser Arg Xaa Thr Ser Thr Lys Gly Ile Lys
35 40 45

Tyr Gly Glu Arg Val Lys Lys Asn Met Thr Leu Ser Phe Asn Ser Thr
50 55 60

Leu Pro Phe Leu Lys Ile Met Asp Val Lys Pro Glu Asp Ser Gly Phe
65 70 75 80

 Tyr Phe Cys Ala

<210> 10

<211> 84

<212> PRT

<213> Homo sapiens

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<222> (13)..(14)

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<222> (26)..(30)

<223> The xaa at positions 26 through 30 represents an
unknown amino acid.

<220>

<221> UNSURE

<222> (61)

<223> The xaa at position 61 represents an unknown amino
acid.

<400> 10

Val Thr Ile Thr Cys Pro Phe Thr Tyr Ala Thr Arg Xaa Xaa Gln Leu
1 5 10 15

Lys Lys Ser Phe Tyr Lys Val Glu Asp Xaa Xaa Xaa Xaa Xaa Gly Glu
 20 25 30

Leu Val Leu Ile Ile Asp Ser Ser Ser Lys Glu Ala Lys Asp Pro Arg
 35 40 45

Tyr Lys Gly Arg Ile Thr Leu Gln Ile Gln Ser Thr Xaa Thr Ala Lys
 50 55 60

Glu Phe Thr Val Thr Leu Lys His Leu Gln Leu Asn Asp Ala Gly Gln
 65 70 75 80

Tyr Val Cys Gln

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<210> 11
 <211> 84
 <212> PRT
 <213> Unknown

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 <222> (53)
 <223> The x at position 53 can represent either
 Phenylalanine, Valine or Isoleucine.

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 <221> UNSURE
 <222> (79)
 <223> The x at position 79 can represent either Alanine
 or Glycine.

<220>
 <223> Description of Unknown Organism: Consensus

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 <223> The xaa at positions 6 through 18 represents an
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<220>
 <221> UNSURE
 <222> (20)
 <223> The xaa at position 20 represents an unknown amino
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<221> UNSURE
<222> (22)
<223> The xaa at position 22 represents an unknown amino acid.

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<221> UNSURE
<222> (25)..(32)
<223> The xaa at positions 25 through 32 represents an unknown amino acid.

<220>
<221> UNSURE
<222> (34)..(35)
<223> The xaa at positions 34 and 35 represents an unknown amino acid.

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<222> (37)..(48)
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<222> (50)..(51)
<223> The xaa at positions 50 and 51 represents an unknown amino acid.

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<222> (54)..(65)
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<222> (71)
<223> The xaa at position 71 represents an unknown amino acid.

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 <222> (80)
 <223> The xaa at position 80 represents an unknown amino acid.

<220>
 <221> UNSURE
 <222> (82)
 <223> The xaa at position 82 represents an unknown amino acid.

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 Xaa Xaa Phe Xaa Trp Xaa Arg Gln Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 20 25 30
 Leu Xaa Xaa Tyr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 35 40 45
 Tyr Xaa Xaa Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 50 55 60
 Xaa Phe Ser Leu Thr Ile Xaa Asn Xaa Xaa Xaa Xaa Asp Ser Xaa Xaa
 65 70 75 80
 Tyr Xaa Cys Ala

<210> 12
 <211> 43
 <212> PRT
 <213> Homo sapiens

<400> 12
 Gln Arg Pro Arg Gly Ser Pro Arg Pro Arg Ser Gln Asn Asn Ile Tyr
 1 5 10 15
 Ser Ala Cys Pro Arg Arg Ala Arg Gly Ala Asp Ala Ala Gly Thr Gly
 20 25 30
 Glu Ala Pro Val Pro Gly Pro Gly Ala Pro Leu
 35 40

<210> 13
<211> 43
<212> PRT
<213> Homo sapiens

<220>
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Xaa Xaa Xaa Pro Arg Pro Thr Glu Gly Ala Thr Cys Ala Gly Pro Gly
20 25 30

Cont
Glu Ser Trp Ser Pro Ser Pro Asn Ser Met Leu
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<210> 14
<211> 36
<212> PRT
<213> Homo sapiens

<400> 14
Met Pro Pro Arg Tyr Gly Ser Leu Arg Gln Ser Cys Pro Arg Ser Gly
1 5 10 15

Arg Glu Gln Gly Gln Asp Gly Thr Ala Gly Ala Pro Gly Leu Leu Trp
20 25 30

Met Gly Leu Val
35

<210> 15
<211> 19
<212> PRT
<213> Homo sapiens

<400> 15
Glu Ser Pro Trp Leu His Ala Pro Ser Leu Lys Thr Ser Cys Glu Tyr
1 5 10 15

Val Ser Leu

<210> 16
<211> 19
<212> PRT
<213> Homo sapiens

<400> 16
Asp Ala Pro Trp Gln Gln His Ala Arg Trp Tyr Asp Arg Cys Glu Tyr
1 5 10 15

Val Leu Leu

Cont
<210> 17
<211> 19
<212> PRT
<213> Homo sapiens

<400> 17
Gln Gln Pro Leu Leu His Pro Pro Glu Pro Lys Ser Pro Gly Glu Tyr
1 5 10 15

Val Asn Ile

<210> 18
<211> 19
<212> PRT
<213> Homo sapiens

<400> 18
Trp Glu Pro Trp Leu Pro Ala Glu Ala Leu Thr Arg Leu Arg Ile Gly
1 5 10 15

Gly Phe Tyr

<210> 19
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<213> Homo sapiens

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Gln Pro Ala Ala Met Met Glu Asp Ser Asp Ser Asp Asp Tyr Ile Asn
1 5 10 15

Val Pro Ala

<210> 20

<211> 19

<212> PRT

<213> Homo sapiens

<400> 20

Thr Glu Ala Cys Val Val Arg Asp Ala Asp Asn Glu Pro His Ile Glu
1 5 10 15

Arg Pro Ala

<210> 21

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<212> PRT

<213> Homo sapiens

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Gln Pro Ala Pro Arg Glu Glu Glu Thr Gly Thr Glu Glu Tyr Met Lys
1 5 10 15

Met Asp Leu

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<213> Artificial Sequence

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic

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acatttggat cagggcaaag 20

<210> 26
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 26
aggggtcttt ggatggac 18

<210> 27
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<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic

<400> 27
ctgggggttg gtagagc

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<210> 28
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<223> Description of Artificial Sequence: Synthetic

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<210> 29
<211> 20
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<213> Artificial Sequence

Conc.
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<223> Description of Artificial Sequence: Synthetic

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20

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic

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27

<210> 31
<211> 29
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 31
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29